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§ 171. **An Orange within an Orange.**—The editor sent me an orange with the request that, should it be sufficiently unusual, I would give an account of it in the BULLETIN. The orange had been peeled for eating, and upon breaking the carpels apart, to divide it into halves, another and much smaller fruit was found within. This, if not the rarest of phenomena, is certainly an interesting one, and some account of it may be acceptable to the readers of the BULLETIN.

The genus *Citrus* appears to have a remarkable tendency to produce abnormal forms, and probably affords writers on vegetable teratology more illustrations than almost any other. Its leaves, flowers and fruit sport in various ways, and even its seeds sometimes contain several extra embryos. Several of the unusual forms of the fruit in oranges, lemons, citrons, etc. are continued in cultivation, on account of their curious or ornamental character.

What is known as the "Fingered Orange" is an illustration of that deviation from the normal condition called *dialysis*, or the separation of parts that are ordinarily united. In this, the carpels are united below but separated above, and some specimens present the appearance of a hand with its fingers extended. Doct. Maxwell T. Masters (*Vegetable Teratology*, p. 74) figures a specimen in which this separation continues quite to the base, thus making a twin fruit of two nearly equal, somewhat fusiform, parts.

In the "Horned Orange" (and Lemon), perhaps more generally cultivated than any other sport, the abnormal condition is shown in the flower, in which the usual compound ovary is closely surrounded by a ring of supernumerary carpels, which are really transformed filaments. In the development and maturing of the fruit, these outer carpels become so fused together below as to present a smooth exterior, and they are completely consolidated with the ovary proper, but their upper portions remain distinct and, projecting more or less above the general surface, appear as "horns."

In all these malformed citrus fruits, those parts which are exposed to the air and light, are covered with the usual yellow rind, but where the carpels are surrounded and protected by others, they are destitute of rind. The "Horned Orange" and several other abnormal forms are figured by Risso & Poiteau in "*Histoire Naturelle des Orangers, etc.*," indeed, one who has studied the fine colored plates of that elegant work is prepared for almost any anomaly the genus may present.

The specimen sent by the editor illustrates that abnormal condition termed *pleiotaxy*, an increase in the number of whorls (as distinct from *polyphyly*, a multiplication of the parts in the same whorl), and which is of more frequent occurrence in other parts than here, in the gynaeceum. A second set of carpels has been produced within the usual ring of carpels, and as the intruders are surrounded by the normal set, they are without rind, and, being much crowded, are not perfectly regular in shape.

This condition within the orange has occurred two or three times within my knowledge, but according to Moquin Tandon (*Teratologie Végétale*), it is sufficiently frequent for such oranges to be recognized in the Canaries as a popularly known class, and to be given a dis-

tinctive name. In these islands, the oranges containing a smaller one within them, are termed *pregnadoes*, or pregnant fruit, and Ferrari (*Hesperides*) conveys this same idea in calling such fruits *fatiferes*.

Moquin Tandon states, that three and even four fruits have been found enclosed, one within another, but does not name the kinds of fruit in which these unusual numbers have been noticed.

There is an apple-tree in Pennsylvania, the fruit of which, when cut longitudinally, presents two sets of carpels, or cores, and is popularly known there as the "Two-storied Apple," the extra set being above the other. This case is still different from the editor's orange, or the "Horned Orange." The flower of this apple is apetalous by abortion, and bears upon the calyx tube a set of supernumerary carpels, which stand in place of the petals, and which in the development of the calyx-tube, to form the mass of the fruit, become involved by and imbedded in it.

GEORGE THURBER.

§ 172. **Hypogaeous Fruiting in *Callitriche*.**—The following communication was sent to me, as editor of the *American Agriculturist*, for publication in that journal. As the observation, which, so far as I can learn, is for the first time recorded, is of interest to botanists only, I requested the author, Doct. J. P. Joor, of Harrisburg, Texas, to allow me to transfer it to the BULLETIN, as it would here meet the eye of a much larger number of botanical readers.

GEORGE THURBER.

Callitriche Nuttallii, Torr., a very diminutive, prostrate species, is not uncommon in the damp soils of South-Eastern Texas. It hugs the ground at all times very closely, and after a while appears to take root at every joint. The rooting I find, however, to be a mistake. The peduncles, two at each joint, are quite short at flowering time. After the flowers are fertilized, the peduncles lengthen, at the same time turning downwards, until the little nutlets, characteristic of the genus, are forced quite beneath the surface of the moist earth. If collected at this time, the peduncles appear like roots, bearing little tubers at their ends.

Several of the Leguminosae, and some other plants, ripen their fruit under ground, but I have never seen any allusion to the same thing in *Callitriche*.

J. F. JOOR, M.D.

§ 173. **The Tamarisk Naturalized.**—Doct. J. F. Joor, Harrisburg, Texas, writes: "On a recent visit to Galveston, I found a Tamarisk, *Tamarix Gallica* (I think), growing on the island in the greatest profusion, along ditches, the borders of ponds, etc., and apparently perfectly naturalized. It is the only arborescent plant that seems to thrive on the island. I do not think it has before been reported as growing wild in the United States."

§ 174. **Obituary.**—Prof. Oran Wilkinson Morris, A.M., recently Librarian of Cooper Union, died on the 9th day of August, 1877, at the house of his son, Dr. Moreau Morris, in East 52d St., New York City.

He was a lineal descendant of Richard Morris, who emigrated to this country from the West of England in company with John Winthrop and was an honored member of the Commonwealth of Massachusetts.